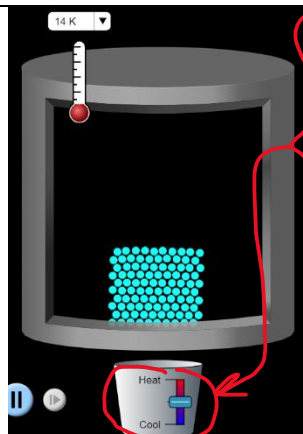


Name _____ Period _____

Skill 6.03 Exercise 1

Navigate to the states of matter simulation below,

https://phet.colorado.edu/sims/html/states-of-matter-basics/latest/states-of-matter-basics_en.html



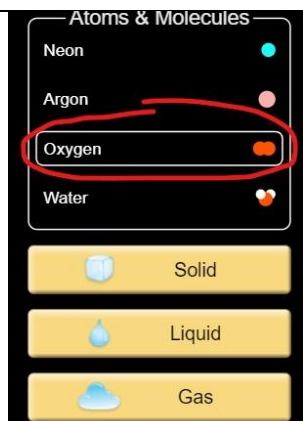
To turn the solid into a liquid, what do you have to do? Was energy added or removed during this process?

To turn the liquid back into a solid, what do you do? Was energy added or removed during this process.

Reset the simulator by refreshing the page. Are the molecules in the solid state still moving? Why or why not?

Now slide the temperature control to the “Cool” position. Hold it there until it reads 0 K. Are the molecules still moving? Why or why not?

Move the slider up until the neon molecules appear to turn into a gas. At what temperature does neon turn into a gas?



Change the gas to oxygen. Move the slider temperature control slider to the “Cool” position. Hold it there until it reads 0k. Move the slider up until the oxygen molecules appear to turn into a gas. At what temperature does oxygen turn into a gas?

Did oxygen and neon turn into a gas at the same temperature? Which substance required the most heat? Why do you think?

Chemistry
Ticket Out the Door
Set 6 Physical Changes

Name _____ Period _____

Skill 6.04 Exercise 1

How does the energy required to turn neon into gas compare to the energy required to turn oxygen into a gas? Which process is most endothermic?

Is the process of turning oxygen and neon back into their solid state endothermic or exothermic? Which process is most exothermic?

Skill 6.05 Exercise 1

Draw an energy diagram that illustrates the process of neon going from a solid to a gas. Do the same for oxygen. How do your energy diagrams compare?

Chemistry
Ticket Out the Door
Set 6 Physical Changes

Name _____ Period _____
